

N^o 23,186



A.D. 1904

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Complete Specification Left, 27th July, 1905—Accepted, 31st Aug., 1905

PROVISIONAL SPECIFICATION.

Improvements in and connected with Stretchers, & like Folding Furniture "

I, JAMES HODSON of 50, Pembroke Place, Liverpool in the County of Lancaster, Managing Director of a Limited Company, do hereby declare the nature of this invention to be as follows;—

This invention has for its object improvements in stretchers & the like adapted for various purposes more especially however for ambulance work, comprising a special hinge or junction piece adapted for use in connection with the stretcher or the like where it is desired to hinge together two members in a straight line.

In carrying out the invention the hinge or junction piece is made of channel section preferably of malleable steel. Members to be joined or hinged together are held in the channel piece by means of rivets or bolts about which they turn. On the top of the channel piece is a rebate or cut away portion so as to allow the inner ends of the members to freely turn in the channel piece.

The stretcher comprises two poles each made of three lengths of tubing similar to that used in bicycle construction hinged by means of two junction pieces such as described so as to be capable of being folded up, these poles are held apart against the tension of the usual mattress or canvas when in use by links or rods pivotted to the poles, and also hinged at or about their middle points, and capable of being locked in their extended position. If desired the stops may be arranged on the hinging rods or cross pieces which will take over the same somewhat so as to give further rigidity to the structure.

In order that the stretcher may fold up into as small a space as possible and all the pieces of tubing be brought parallel in the folded up position, one of the junction pieces on both poles is formed of a lengthened channel piece so that the points of hinging the tubing are far enough apart to allow the third piece of tubing to be brought up parallel to the middle piece, after which the other piece hinging in the lengthened channel piece can be brought over the third member and then turned down parallel to it.

The canvas forming the centre part of the stretcher is preferably permanently secured on the poles by sewing or other suitable means, the canvas being hemmed over the side poles. It will be obvious however that the part of the hem which comes at the junction pieces must not be permanently secured down as this will prevent the proper flexing of the joints, the hem is therefore cut at these points so that a flap is left free, which flap when the stretcher is open can if desired be turned over the joint and secured in its proper position by any suitable means such as straps, spring buttons, or hooks and eyes or the like.

In order to fold up the stretcher all that it is necessary to do is to flex the crosspieces and so bring the poles together then to fold the members joined together by the small junction piece, after which the members joined by the longer junction piece are folded over so that all the six members are brought parallel and the whole stretcher brought into a small and compact space.

If desired the mattress could be made so as to be removable from the poles

[Price 8d.]

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being secured for its whole length by hooks and eyes or other easily releasable devices, also the posts instead of flexing at two points could flex at one or four or more points, although the two points above indicated are found to be the most convenient. Further instead of having the posts when the stretcher is opened held apart by cross pieces hinged in the manner described, straight cross pieces could be used hinged on to one of the rods and provided with a fork at the other end so as to take over the other post and to hold the posts apart against the tension on the mattress, also the mattress or canvas can be provided at one or both ends with pockets to contain suitable "first aid" or other appliances while the ends of the posts could be provided with suitable wooden or other handles so that in very cold weather there would be no fear of the hands of the persons using the stretcher being frozen to the same.

Dated this 26th day of October 1904.

For the Applicant;

W. P. THOMPSON & Co.,
6 Lord Street, Liverpool.

COMPLETE SPECIFICATION.

"Improvements in and connected with Stretchers and like Folding Furniture."

I, JAMES HODSON, of 50, Pembroke Place, Liverpool, in the County of Lancaster, Managing Director of a Limited Company, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement;—

This invention has for its object improvements in stretchers and the like adapted for various purposes more especially however for ambulance work, comprising a special hinge or junction piece adapted for use in connection with the stretcher or the like where it is desired to hinge together two members in a straight line.

In order that the invention may be fully understood reference will now be had to the accompanying drawings in which,

Figures 1 and 2 are plan and elevation respectively of the stretcher;

Figure 3 a view of the frame work folded up;

Figures 4 and 5 elevations of the hinge or junction pieces;

Figures 6 and 7 details of the connecting links.

In carrying out the invention the hinge or junction piece *a* is made of channel section preferably of malleable steel. Members to be joined or hinged together are held in the channel piece by means of rivets or bolts *c* about which they turn. On the top of the channel piece is a rebate or cut away portion *d* so as to allow the inner ends of the members to freely turn in the channel piece *a*. This cut away portion may be arched over as shown in Figure 5 or left open as in Figure 4.

The stretcher comprises two poles *E* each made of three lengths of steel tubing *e*, *e*¹, *e*², or if desired wood or other material hinged by means of two junction pieces *a* and *a*¹ such as described so as to be capable of being folded up, these poles are held apart against the tension of the usual mattress or canvas *f* when in use by links or rods *g* pivotted to the poles at *h*, and also hinged at or about their middle points, and capable of being locked the one relative to the other in their extended position by being pressed so that the two parts are straight and then pressed further just out of the straight when they are locked by the stops *k*. Stops *h*¹ prevent the links or rods *g* from swinging

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relative to the poles when in the folded position while stops h^2 prevent any movement of the links relative to the poles when the stretcher is erected.

In order that the stretcher may fold up into as small a space as possible and all the pieces of tubing be brought parallel in the folded up position, one
 5 of the junction pieces a on both poles is formed of a lengthened channel piece so that the points of hinging c of the tubing E are far enough apart to allow the third piece of tubing e^2 to be brought up parallel to the middle piece e^1 , after which the other piece e hinging in the lengthened channel piece a can be brought over the third member e^2 and then turned down parallel to it. If
 10 desired the junction pieces may be provided with suitable locking devices to hold the parts e , e^1 , e^2 , in their extended position.

The canvas f forming the centre part of the stretcher is preferably permanently secured on the poles by sewing or other suitable means, the canvas being hemmed over the side poles. It will be obvious however that the part of
 15 the hem m which comes at the junction pieces must not be permanently secured down as this will prevent the proper flexing of the joints, the hem is therefore cut at these points so that a flap n is left free, which flap when the stretcher is open can if desired be turned over the joint and secured in its proper position by any suitable means such as hooks and eyes, straps, spring buttons, or the
 20 like.

In order to fold up the stretcher all that it is necessary to do is to flex the crosspieces g and so bring the poles E together then to fold the members e^1 and e^2 joined together by the small junction piece a^1 , after which the members e^1 and e^2 joined by the longer junction piece a are folded over so that all the six
 25 members are brought parallel and the whole stretcher brought into a small and compact space.

If desired the mattress could be made so as to be removable from the poles being secured for its whole length by hooks and eyes or other easily releasable devices, or in the case of wooden poles the mattress could be fastened by nails
 30 or the like, also the posts instead of flexing at two points could flex at one or four or more points, although the two points above indicated are found to be the most convenient. Further instead of having the posts when the stretcher is opened held apart by cross pieces hinged in the manner described, straight cross pieces could be used hinged on to one of the rods and provided with a
 35 fork at the other end so as to take over the other post and to hold the posts apart against the tension on the mattress, also the mattress or canvas can be provided at one or both ends with pockets to contain suitable "first aid" or other appliances while the ends of the posts could be provided with suitable wooden or other handles so that in very cold weather there would be no fear
 40 of the hands of the persons using the stretcher being frozen to the same.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. The improvement in stretchers which consists in making the side poles in
 45 a number of parts and connecting these parts by junction pieces permitting the poles to flex in one direction only the pivotal points of which junction pieces are so spaced as to allow the various parts to fold up parallel substantially as described.

2. A hinge or junction piece for use in connection with stretchers and the
 50 like comprising a channel piece, the cheek pieces of which receive the pivotal means, while a rebate or cut away portion is formed on the top to allow of the turning of the inner ends of the members formed together thereby.

3. The combination in a stretcher of side poles capable of flexing at a number of points in one direction only being joined by junction pieces the pivotal
 55 points of which are differently spaced, with links or rods adapted to hold the poles apart against the tension of the mattress and be locked in their extended position.

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4. In a stretcher such as described the arrangement of flaps over the junction pieces capable of being undone so as to permit the poles to be folded up without removing the mattress therefrom.

5. In a stretcher the various parts described, arranged and co-acting substantially as and for the purpose set forth.

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Dated this 26th day of July 1905.

For the Applicant:

WM. P. THOMPSON & Co.,
6 Lord St, Liverpool, and 322 High Holborn, London,
Chartered Patent Agents.

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Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1905.



FIG. 3.

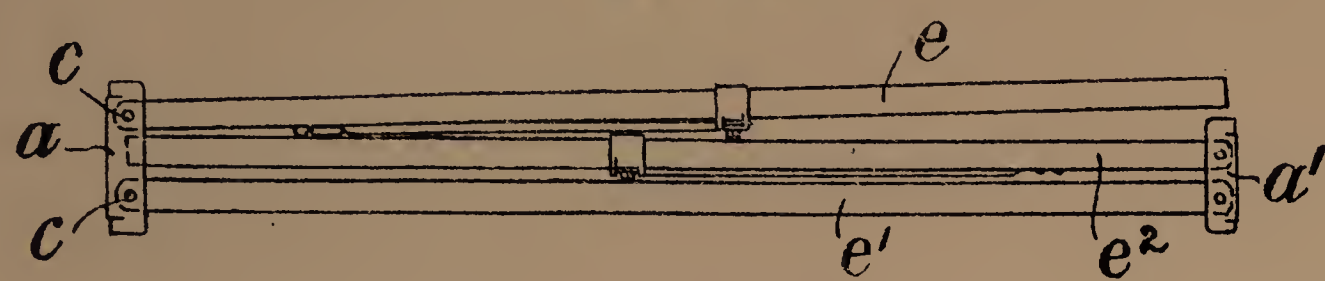


FIG. 4.

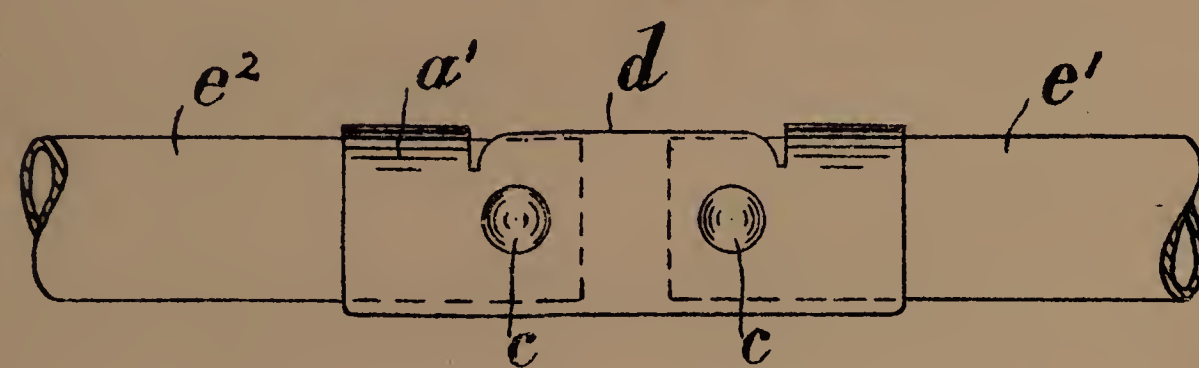


FIG. 5.

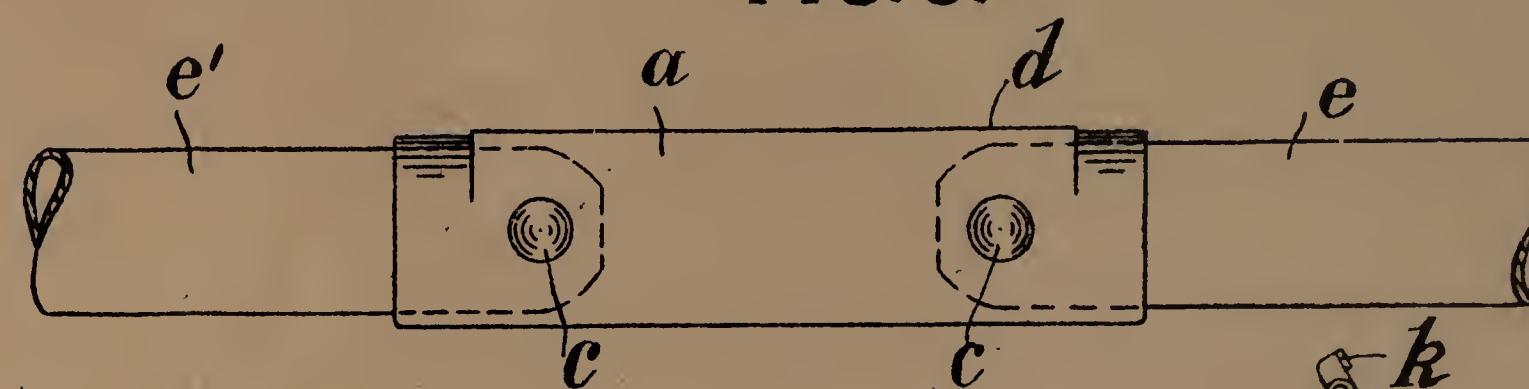


FIG. 6.

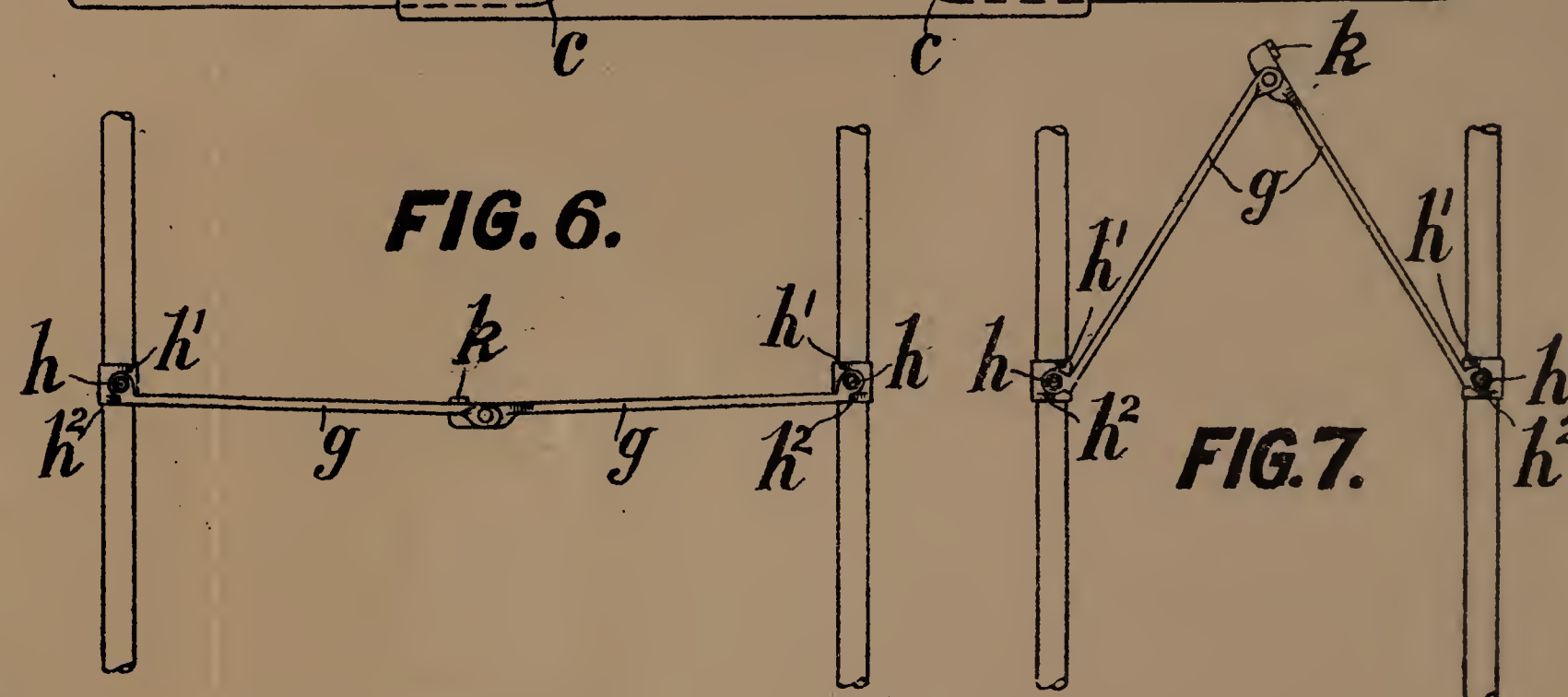


FIG. 7.

FIG. 2.

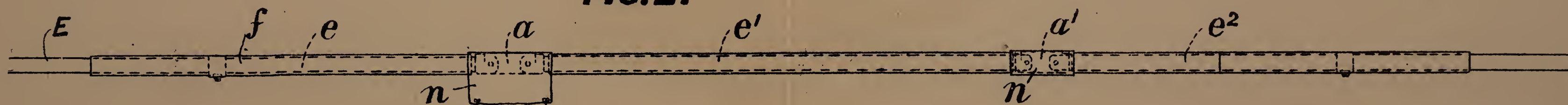
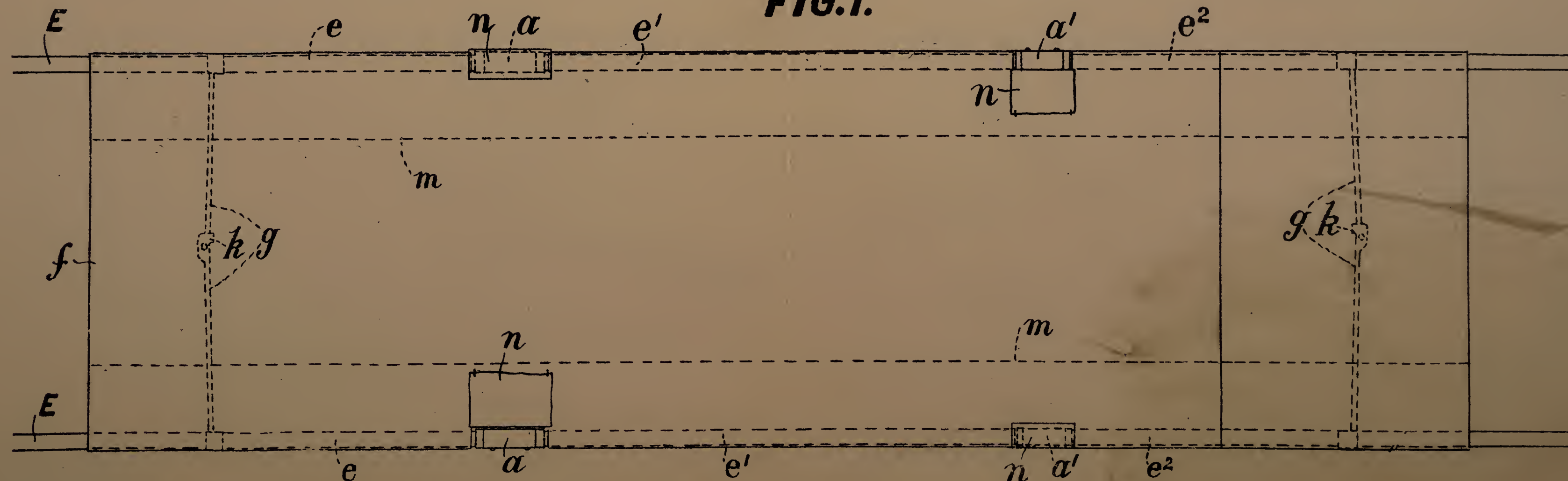


FIG. 1.



[This Drawing is a reproduction of the Original on a reduced scale.]

